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DynaLIFE MEDICAL LABS

Laboratory Bulletin

Date: **June 15, 2020**
To: **All physicians, midwives and labor/delivery units**
From: **Alberta Precision Laboratories**
Re: **Kleihauer Betke Testing and Rh Immune Globulin Dosing**

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Key Message:

- Rh immune globulin (RhIG) is administered for the prevention of RhD alloimmunization in the setting of pregnancy. The Kleihauer-Betke (KB) test quantifies the volume of fetal maternal hemorrhage to determine if additional RhIG doses are required. Due to the inherent imprecision of the KB test, there is a risk of underdosing RhIG in women with large FMH.
- For all RhIG eligible post-partum women, the standard postpartum dose of 300ug RhIG is administered prior to the FMH testing being completed. Calculations for RhIG dosing have recently been standardized across the province to align with recommendations from the AABB and CAP (references below).
- As a result, clinicians may notice that larger doses of RhIG are being recommended for women who have undergone KB testing.

Why this is important:

- Underdosing of Rh immune globulin in women with large fetomaternal hemorrhage may lead to RhD alloimmunization and risk of hemolytic disease of the newborn in subsequent pregnancies.

Action Required:

- All RhIG eligible patients must undergo testing for maternal fetal hemorrhage post-partum or following events that may have contributed to FMH during pregnancy. If initial screening tests suggest a large FMH that would not be covered by the standard dose of RhIG, clinicians must follow up with the results of quantitative Kleihauer-Betke testing to ensure that the recommended additional RhIG doses are administered.
- Additional RhIG dosing should be administered within 72 hours of delivery or prenatal stimulating events, but administration beyond this time frame may still be effective and should not be withheld.

Inquiries and feedback may be directed to:

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- Dr. Melanie Bodnar, Hematopathologist, (780) 735-8154

This bulletin has been reviewed and approved by:

- Dr. Carolyn O'Hara, Chief Medical Laboratory Officer (Interim), Alberta Precision Laboratories
- Dr. Raymond Lai, Medical Director, *DynaLIFE* Medical Labs

References:
Delaney M., Lieberman, L., Svennsson, A. (2017). Perinatal Issues in Transfusion Practice. In MK Fung (Ed.) AABB Technical Manual 19th Edition. Bethesda, Maryland. AABB.

Glenn Ramsey (*2009*) Inaccurate Doses of Rh Immune Globulin After Rh-Incompatible Fetomaternal Hemorrhage: Survey of Laboratory Practice. Archives of Pathology & Laboratory Medicine: March 2009, Vol. 133, No. 3, pp. 465-469.